

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

REMARKS/ARGUMENTS

Claim 26 is canceled. No amendments are made to the pending claims 1-25 and 27-30. Entry of this Response is proper since no additional search is required and the remarks are solely directed to the positions taken by the Examiner as to the meaning and proper interpretation of the claims of record and the cited Kohei reference.

Reconsideration of the Examiner's final rejection is respectfully requested in view of the following remarks.

The Examiner has repeatedly rejected Claims 1, 2, 6, 7, 9-13, 24 and 26 - 30 under 35 U.S.C. § 102 as being anticipated by Japanese Patent No. JP 08-234903 to Kohei (hereinafter Kohei). Applicant respectfully traverses the rejections.

In Claim 1 of the present invention is claimed the feature - "a primary fingertip receptacle ... providing a contact lip surface at generally transversely opposed sides and at generally longitudinally opposed portions of a received index finger, thereby allowing the user to move the mouse in any direction ..."

The feature is rejected by the Examiner under 35 U.S.C. 102(b) as being anticipated by Kohei (see rejection of Claim 1 - "Drawing 6 shows the manual buttons 3 and 4 on opposite sides which provide a contact surface for the fingers to actuate on.").

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

Applicant submits that the Examiner has failed to properly appreciate the claimed features, the subtleties of operation of a mouse, and/or the proper teaching that should be afforded to Kohei.

Applicant respectfully submits that the Examiner's interpretation is impermissibly broad and fails to properly consider clear limitations of the claims. In this regard:

- a lip surface is not equivalent to a plane surface, as the Examiner asserts;
- at transversely opposed and longitudinally opposed portions of a finger, i. e. at virtually every side of the finger, is not equivalent to at only one side of the finger, as the Examiner asserts;
- to move the mouse is not equivalent to actuate the button, as the Examiner asserts;
- a cylinder has a convex outside surface but not concave, as the Examiner asserts.

As for the Examiner's broadest reasonable interpretation, that Kohei does indeed teach of contact surface on opposite traversable sides above manual buttons 3 and 4. Kohei's Drawing 6 shows surfaces above the manual buttons and on the left and right sides of Kohei's device, which are on an incline evidently to the user's side; and there is indeed no a lip surface or any other structure that provides resistance to an interior portion of the distal phalange of the user's finger.

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

By attempting to move Kohei's mouse towards the user by flexing the finger, when placed on by the Examiner alleged contact areas, and by using only the force of friction between the fingertip and the contact surface, (there is no any structure to resist) the pressure of the fingertip will push the mouse away from the user.

The way of operating Kohei's device is described in detailed specification as follows: "... the cursor can be delicately moved by moving finely an operator's finger inserted in the crevice of the housing"; and further "...the septum for lifting a housing with the finger inserted between the two crevices concerned is formed ...and also with two fingers inserted in this crevice, the septum concerned can be lifted and it can move" (see Kohei 0018 and 0020).

The subject matter of the Kohei disclosure is the form of the mouse casing and the construction thereof. The crevice 8 "*is formed in the up housing 1*", and is open palm wards (see Kohei's drawings), wherein the button is "*arranged at the pars basilaris oasis occipitals of a crevice*" (Kohei 0024) and is on the horizontal plane (see Drawing 4). Each embodiment of Kohei's device lacks a lip surface or any other structure that provides resistance to the interior portion of the distal phalange of the user's finger.

Therefore, shifting Kohei's mouse by flexing the user's finger, when inserted in the crevice 8, is possible only by the use of the force of friction between the fingertip and the button surface. The user must put considerable pressure onto the button surface by shifting the mouse in order to get over the

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

force of friction between a housing base and a desk 20, because the contact area between *a housing base and the installation sides 20* is largely more than the contact area between the fingertip and the button surface.

The cylinder by the height 25 mm assumes to have the diameter of *the base of the lower housing 2* minimum 50 mm (at least doubled height) in order to be not turned over when pushed against the crevice "*which a part of that top face and peripheral surface cut and lacked is formed in the up housing 1*". (see Kohei 0024 and 0026)

Consequently, by attempting to actuate movement of Kohei's device by flexing the finger, when inserted in the crevice, the button will be undesirably actuated before the mouse will be moved. Furthermore, the construction of Kohei's device described in detailed specification and given in Drawings 4 and 5 unquestionably presume that the user must put an additional pressure on housing 1 by mouse moving in order to actuate cursor movement on the screen. The deficiencies of Kohei are apparent from a careful review of Kohei.

See Kohei's reference as follows:

"lower housing 2 is formed with the disk in which elastic deformation is possible" (see Kohei 0027); and

"but where a housing is pushed against an installation side with a finger, only when it moves, cursor or a pointer moves on a scope" (see Kohei 0021, Drawing 4); and further

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

“Moreover, drawing 5 shows the condition of having put the finger on the crevice 8 of the up housing 1, and having pushed the housing against the installation side 20 lightly. In this condition, the periphery section of the lower housing 2 is pushed by the installation side, elastic deformation of the lower housing 2 is carried out, that base becomes Taira and others, the location of a hole 6 descends and the ball 5 is in the condition of having contacted to the installation side 7”. (see Kohei 0032)

Summarizing all discussed above, the form of the crevice and the construction of the casing of Kohei's device do not provide operating the same by flexing the finger, when inserted in the crevice, without undesirable actuation of the button.

There is also no proper basis for the Examiner's assertion that there is a contact area above the additional buttons for easier actuation of the mouse of the present invention. To the contrary, the structure the Examiner allegedly asserted, as a contact, area above additional button is actually a cutting made in the button to provide the space between the button and the user's index/middle finger, when stretched against the front edge of the mould. The cutting is made generally parallel to common plate 140, which is inclined toward the front end of the casing relative to a cross panel of the casing (see Claim 27, Drawings 3, 7 and 9).

Thus, the angle apparently suggested by the Examiner as allowable subject matter of the invention actually is claimed, nevertheless, repeatedly

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

rejected by the Examiner (see rejection of Claim 27 – Drawing 6 shows the septum to be on an incline). Kohei's Drawing 6 shows the septum to be on an incline toward the rear end of the casing. By attempt to use the upper surface of the septum for moving the mouse toward to the user, the mouse, as shown above, will be moved away from the user.

The present invention concerns the specific form of the upper surface, and construction of the mouse buttons, and the form of the mouse casing. Kohei teaches neither the form of the upper surface nor the construction of the buttons.

In contrast to Kohei, the contact surfaces for user's fingers formed on the upper surface of the buttons and construction of the buttons of the present invention allow the user to move the mouse in any direction via the fine motion by the finger without the risk of the undesirable actuating the buttons. The primary and secondary buttons of the mouse 100 each are parts of ends of levers, which longitudinally extend from a common plate on which other ends of the levers are firmly fixed on the upper casing (see Claim 24, Drawing 5 and 7). The common plate 140 is inclined toward the front end of the casing relative to a cross panel of the casing (see Claim 27, Drawing 7).

It is self-explanatory that the force applied by user's finger at the edge 151 or 152 of the mould 117 or 118 in direction indicated by arrow 5 of Drawing 3 will bend the lever 105c or 106c rather upwards than downwards (see Drawings 3, 5, 6, and 7; paragraphs 0051, 0054). Consequently, the user can actuate forward

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

movement of mouse 100 by stretching the finger, without actuating the primary or secondary button.

Further, when the finger is inserted in the mould, the fingernail side thereof contacts the front edge 151 or 152 of the mould, and the interior portion of the distal phalange of the finger touches the contact lip surface on the rear side of the mould (see Claims 1, 2, 15, 17, 20, and 22; Drawings 3 and 7; paragraph 0053). By flexing the finger in direction indicated by arrow 7 of Drawing 3 the resistance of the contact lip surface and construction of the button (see Claims 24 and 27) allow the user actuation the mouse movement without undesirable actuation of the primary or secondary button.

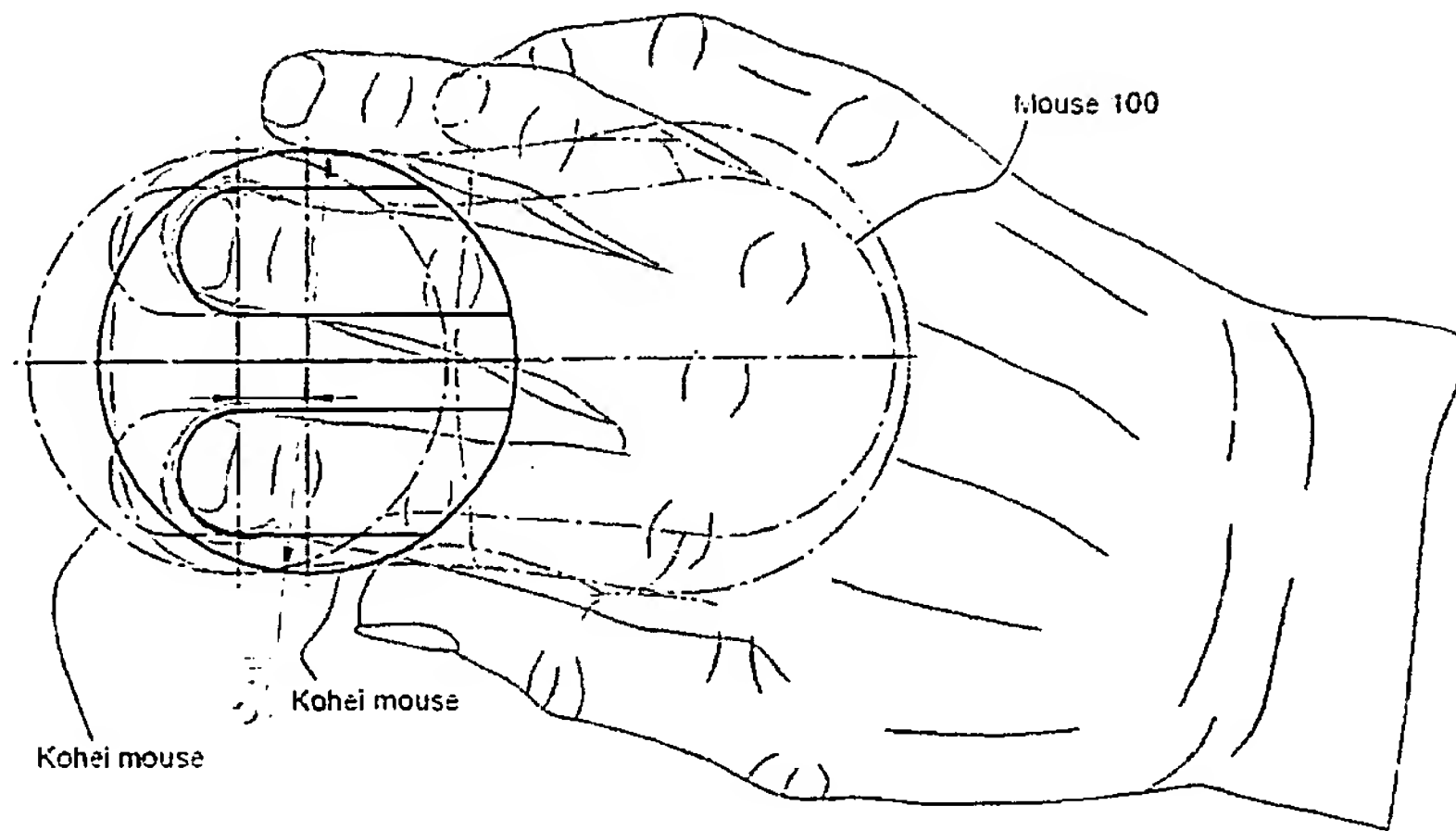
In the embodiment with the additional buttons, the construction thereof provides that the pressure from the user's fingertip caused by the mouse moving and actuating the additional button is applied on the planes 145 or 146 of the upper casing on which the button slides by actuation thereof. The planes are arranged parallel to the common plane 140 of the upper casing (see Drawings 5 and 6; paragraphs 0050 - 0052). The pressure from the user's fingertip, when rested in the mould, is applied on the ridgeline 131 or 132 of the additional button 129 or 130 that are contoured such that their fronts jut forth into the mould-formed contact area of the primary or secondary button partly overlapping its. These allow the user to move the mouse 100 and/or to actuate the additional button by flexing the user's finger without the risk of the undesirable actuating the primary or secondary button (see Drawings 5, 6, and 7; paragraph 0054).

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

The mould-formed contact area of the primary or secondary button encourage the user to actuate the button in a biomechanically convenient way, by stretching the index or middle finger, in the combined down-forward motion (Claims 1 and 2). The force applied by user's finger on the contact area of the mould 117 or 118 in direction indicated by arrow 6 of Drawing 3 will bend the lever 105c or 106c downwards; thereby, actuating the primary or secondary button without actuating movement of the mouse 100 (see Drawings 3, 5, 6, and 7; paragraphs 0013, 0034, 0048).

One of the present device's features is the form of the casing. The differences in the form of Kohei's device and the mouse of the present invention, which critically differentiate the way of operating both devices, can be clearly demonstrated by inserting a contour of the top view of Kohei's mouse into Fig. 4 - a top view of the mouse 100 of the claimed invention with a superimposed hand shown in a neutral posture.

The given picture shows that even in the neutral fingers/hand posture the user's thumb and the ring finger stroke the up housing 1 of a cylindrical shape of Kohei's device behind the diametral cross section. It means that by attempt is to pinch Kohei's mouse between the user's thumb and the ring finger the up housing 1 of a cylindrical shape will be likely to slip out; because the thumb and ring fingers pinching areas are convex; in contradiction of Examiner's assertion rejecting Claim 9 – Drawing 6, concave housing 1.



Furthermore, the illustration demonstrates that after moving Kohei's mouse forward, approx. 10mm, by stretching the index and/or middle fingers against crevice 8 the up housing 1 is out of contact with the user's thumb and little finger (see position Kohei's mouse shown by dotted line). They can stretch the ring finger but not the thumb. As shown, the convex shape of the up housing 1 does not provide contact or securely pinching the mouse with/between the thumb and/or ring, little fingers when operating Kohei's mouse. Further, Kohei teaches "a disc-like member constitutes a lower housing and the up housing 1 of a cylindrical shape" (Kohei 0015, 0024), wherein "the ball 5 is arranged in the center of the lower housing 2", (Kohei 0027). It is self-explanatory that by turning the cylinder around its axis, in which a sensor of mouse movement is arranged, will not effect cursor movement on the screen.

In contrast to Kohei, the form of the mouse casing of the present device (see Claim 1) and positioning of the sensor of mouse movement (see Claim 28)

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

enable the computer user to navigate the mouse in the way explicitly described in the specification (see paragraphs 0042-0044) and shown in the Drawings 4A, and 4B. These allow the user to effect horizontal or diagonal movement of the pointer on the computer screen with enhanced positional control of the pointer placement without using his hand or arm movement. The concave pinching areas (see Claim 9), the form, and length of the rear part of the casing (see Claims 1,2, and 13), of the mouse 100 casing provide contact or securely pinching the casing with/between the user's thumb, and/or ring, little fingers in any position when operating the mouse 100 (see Claims 10 - 12).

Summarizing all discussed above, unlike in Kohei's device, the present device's fundamental features such as the contact surfaces for user's fingertips formed on the upper surface of the buttons and construction of the buttons enable the user to operate the buttons and move the mouse in any direction without undesirable actuation of the buttons and without the use of his hand, resulting in delicate actuation with just the fingertips. Contrary to Kohei, the receptacles and form of the casing, which longitudinally extends from the front end to the rear end thereof, allows the user to effect horizontal or diagonal movement of the pointer on the computer screen with enhanced positional control of the pointer placement without his hand or arm movement.

As indicated above, Kohei clearly does not teach each and every element of the present invention. Consequently, in a view of all discussed above, Kohei

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

does not teach each and every limitation of Claims 1 and 2 and the claims are allowable over Kohei.

Claims 2-25 and 27-28, which depend directly or indirectly on amended claim 1, are patentable for the reasons advanced for amended claim 1.

Applicant respectfully traverses the Examiner's rejection of Claims 29 and 30.

None of the references cited by the Examiner included the Kohei reference disclose, teach or suggest a molded component that is mounted to an upper surface of the button and is configured to form a receptacle having the shape of a fingertip of a user. In this regard, the cited Kohei reference does not disclose the molded component mounted to the upper surface of the button.

Taking in account all above mentioned concerning the form and construction of the mouse buttons, which could critically determine the way of mouse operating, the Examiner will appreciate the difference in that the moulded component 217 or 218 of the mouse 200 is mounted to the upper surface of the button 205 or 206 of mouse 200 but not to the mouse casing over the manual buttons (see Drawings 11 and 12).

Likewise, claim 30, which depends on claim 29 is patentable for the reason advanced for claim 29. In addition, the Kohei reference does not disclose a molded component mounted to an upper surface of each of two buttons.

Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

Additionally, the Examiner rejected Claims 3, 4, 5, 8, 14-23 and 25 under 35 U.S.C. § 103 as obvious over Kohei in view of U.S. Patent No. 6,348,912 to Smith (hereinafter "Smith").

The noted deficiencies of the Kohei reference may not be properly supplemented by the Smith reference.

The Examiner used Smith for the disclosures of "additional buttons" and a scroll wheel disposed between the primary receptacle and secondary receptacle. However, although both references teach a type of computer mouse, there exists no motivation to combine the references to yield the present invention. As discussed above, Kohei does not disclose a finger receptacle with a rear lip. Additionally, Smith fails to teach any sort of finger receptacle, let alone one with a rear lip surface. Most importantly, one of ordinary skill in the art would never be motivated to combine Smith with Kohei to create a mouse with additional buttons on a rear lip of a finger receptacle.

Similarly, it is clear that the combination of Kohei and Smith does not yield the device recited in the present claims. As indicated above, Kohei clearly does not teach each and every element of the present invention with exception to the scroll wheel and additional buttons. Kohei fails to disclose a lip surface that provides resistance on the rear side of the finger receptacle (i.e. the edge on the fingerprint side of the finger). Therefore, even if a skilled artisan were to look to Smith in an effort to improve Kohei, the resulting combination would not generate the present device because the rear lip surface would be absent. Therefore,

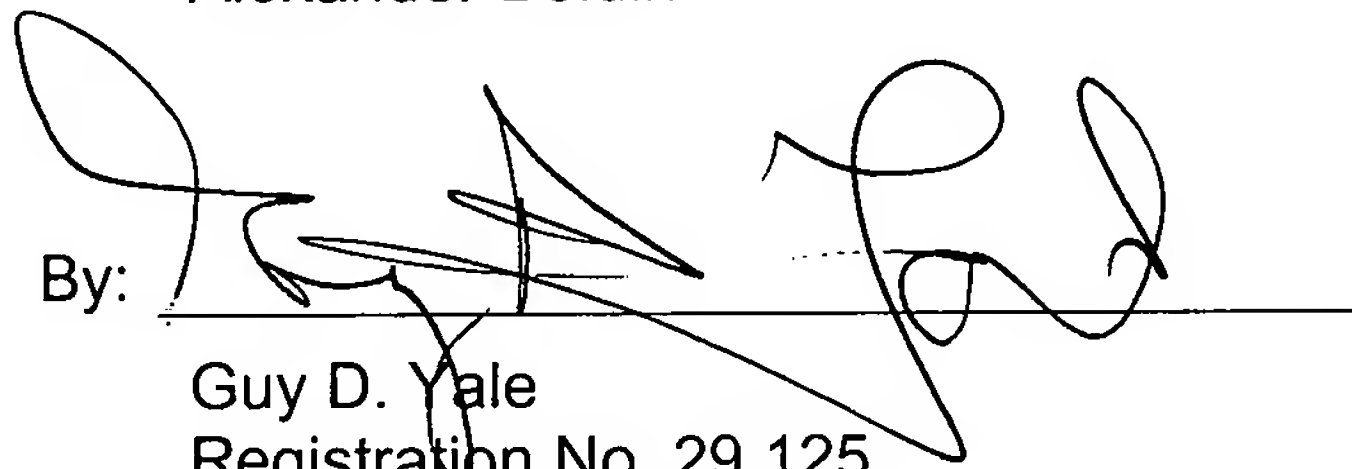
Application No. 10/527,241
Amendment Dated: March 5, 2008
Reply to Office Action of: January 9, 2008

Applicant respectfully requests that the Examiner withdraw his rejections under 35 U.S.C. § 103 of Claims 3, 4, 5, 8, 14-23 and 25.

For the reasons discussed herein, Applicant contends that the Examiner's rejections were improper and respectfully request that the present claims be passed to issuance.

Respectfully Submitted,

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